APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,478	09/16/2003	Sung-Bin Hong	44892	9628

7590   08/05/2008

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ART UNIT	PAPER NUMBER
2622	

MAIL DATE	DELIVERY MODE
08/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 April 2008_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _16 September 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 04/24/2008 have been fully considered but they are

not persuasive. See claim rejections for further explanation (**Bolded text**).

Claim Rejections - 35 USC § 102

2.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

3.   Claims 1 – 10 are rejected under 35 U.S.C. 102 (b) as being anticipated by

Takayama Et al. (US 6,683,643 B1).

4.   Claim 1, Takayama discloses a charge coupled device (CCD) camera (Figure 1)

that compensates for defective CCDs, comprising

        A shutter (Figure 1, Element 12), adapted to adjust incident light for a specific

amount of time;

        A shutter driving unit (Figure 1, Element 8), adapted to drive the shutter (Col 16,

Line 33 – 50 and Col 11, Line 53 - 58);

        A CCD module (Figure 1, Element 1), comprising a plurality of CCDs that are

adapted to output electric signals based on an amount of light incident through the

shutter;

        A memory (Figure 1, Element 5), adapted to store electric signals provided by the

respective CCDs transmitted from the CCD module; and

A control unit (Figure 1, Element 8), adapted to perform the following operations:

Control the shutter driving unit (Figure 1, Element 8) to periodically drive the

shutter **(Col 16, Line 33 – 50, The control circuit 8 which is also the shutter driving**

unit controls the shutter speed and the aperture so that the result of

photographing the image for detecting pixel defects (Bright and flat wall or the

like) will be within certain luminance range, therefore the shutter speed which is

controlled by the control circuit or the shutter driving unit is either decreased or

increased, from that it can be concluded that the control circuit 8 periodically

drives the shutter to detect for pixel defects and as for the argument Takayama

643 patent only checks for defective pixels when manually triggered, claim 1 as

written only requires the control unit to drive the shutter is periodically, therefore

it is irrelevant of how the control unit is triggered, which then drives the shutter

periodically.);

Sequentially storing in the memory photo-electrically converted signals with

respect to the individual CCDs of the CCD module (Col 11, Line 11 – 15, It is well know

to sequentially store photo-electrically converted signals);

Comparing the respective CCD signals stored in the memory to a preset CCD

defect threshold level to detect location information of CCDs that output signals larger

than the CCD defect threshold level (Col 6, Line 39 – 59, and Abstract); and

Replacing each of the respective signals from the CCDs that output signals

larger than the CCD defect threshold level with a respective average signal representing

an average of the signals output by the CCDs adjacent to the respective CCDs that output the larger signals based on the location information (Col 6, Line 39 – 59, and Abstract).

5.   Claim 2, Takayama discloses the CCD camera according to claim 1, wherein the control unit is adapted to control the shutter driving unit to operate the shutter at a low speed (Col 16, line 35 – 38 and Col 16, Line 45 – 50, **The control circuit 8 which is also the shutter driving unit controls the shutter speed and the aperture so that the result of photographing the image for detecting pixel defects (Bright and flat wall or the like) will be within certain luminance range, therefore the shutter speed can be low or high, decreased or increased**).

6.   Claim 3, Takayama discloses the CCD camera according to claim 1, wherein the control unit is adapted to control the shutter driving unit to operate the shutter at a low speed in a predetermined interval based on a vertical period of the CCD data (Col 16, line 35 – 38 and Col 16, Line 45 – 50, **The control circuit 8 which is also the shutter driving unit controls the shutter speed and the aperture so that the result of photographing the image for detecting pixel defects (Bright and flat wall or the like) will be within certain luminance range, therefore the shutter speed can be low or high, decreased or increased**).

7.   Claim 4, Takayama discloses the CCD camera according to claim 1, wherein the

control unit is adapted to control the shutter driving unit to alternately operate the shutter

in odd fields and even fields of the CCDs at the low speed (**Col 16, Line 45 – 50, The**

present invention teaches operating the shutter in odd fields and even fields of

the CCDs at low speed, since the shutter operates in odd and even fields it

operates in all fields. Therefore this limitation can be found in claims 2 and 3 as

taught by Takayama).

8.   Claim 5, Takayama discloses the CCD camera according to claim 1, wherein:

         During the comparing operation, the control unit amplifies the electric signals

of the individual CCDs read out of the memory to a certain level and compares the

amplified electric signals to the CCD defect threshold level (Col 6, Line 39 – 59);

         During the comparing operation, the control unit compares the electric signals of

the individual CCDs to the CCD defect threshold level (Col 6, Line 39 – 59); and

         During the replacing operation, the control unit arranges and stores in a second

region of the memory at a descending order of signal values the location information

relating to the CCDs having electric signals larger than the CCD defect threshold level

(Col 6, Line 39 – 59).

9.   Claim 6, Takayama discloses the CCD camera according to claim 1 further

comprising:

         A second memory (Rewritable memory), adapted to store the location

information of defective CCDs, wherein during the comparing operation, the control unit

compares the electric signals of the individual CCDs to the CCD defect threshold level,

and during the replaying operation the control unit arranges and stores in the second

memory at a descending order of signal values the location information relating to the

CCDs having electric signals larger than the CCD defect threshold level (Col 6, Line 39

– 59).

10.   Claim 7, Takayama discloses a method for controlling a CCD camera to correct

for defective CCDs,

comprising:

        Exposing CCDs periodically to light for a predetermined amount of time (Col 10,

62 – 67);

        Sequentially storing electric signals of individual CCDs based on the exposure

(Col 11, Line 11 – 15, It is well know to sequentially store photo-electrically converted

signals);

        Sequentially reading out the stored electric signals of the individual CCDs (Col 6,

Line 39 – 59);

        Comparing the electric signals to a preset CCD defect threshold level (Col 6, Line

39 – 59);

        Storing location information relating to CCDs having electric signals larger than

the CCD defect threshold level as a result of the comparison (Col 6, Line 39 – 59); and

        Replacing each of the individual signals from the CCDs for which the location

information is stored, with an average signal (mean value, abstract) representing an

average of the signals output by the CCDs adjacent to the individual CCDs based on

the location information (Col 6, Line 39 – 59).

11.   Claim 8, Takayama discloses the method according to claim 7, wherein the step

of comparing comprises:

Amplifying the electric signals of the individual CCDs (Col 6, Line 39 – 59, all the

defects on the image picked up and outputted can be consider as amplification or gain,

therefore the electric signal outputted from the individuals CCDs are amplified); and

Comparing the amplified electric signals of the CCDs to the CCD defect

threshold level (Col 6, Line 39 – 59).

12.   Claim 9, Takayama discloses the method according to claim 7, further

comprising:

Arranging in a descending order of signal values the location information

relating to the CCDs having electric signals larger than the CCD defect threshold level,

after comparing the electric signals of the individual CCD devices to the CCD defect

threshold level (Col 6, Line 39 – 59).

13.   Claim 10, Takayama discloses the method according to claim 9, wherein:

The storing step comprises storing the arranged signal values arranged in the arranging step (Col 11, Line 11 – 15, It is well know to sequentially store photo-electrically converted signals).

Conclusion

14.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SELAM T. GEBRIEL whose telephone number is (571)270-1652. The examiner can normally be reached on Monday-Thursday 7.30am-5.00pm.If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu NgocYen can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Selam T Gebriel/
Examiner, Art Unit 2622
Monday, July 28, 2008

/Ngoc-Yen T. VU/
Supervisory Patent Examiner, Art Unit 2622